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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/775,279	02/01/2001	David Karl Bidner	200-0824	8275

7590 10/24/2003

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EXAMINER	
TRAN, DALENA	

ART UNIT	PAPER NUMBER
3661	

DATE MAILED: 10/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/775,279	BIDNER ET AL.	
	Examiner	Art Unit	
	Dalena Tran	3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 August 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Notice to Applicant(s)

1. This office action is responsive to the amendment filed on 8/4/03. Claims 1-12 are pending.

Claims 4 and 11 have been cancelled in amend on 5/28/2002. However, these two claims appear again on current amendment (8/4/03), so are these two claims are being returned back as part of the claims invention or still status as cancelled claims. Verification is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1,4-6, and 13, are rejected under 35 U.S.C.103(a) as being unpatentable over Mikami et al. (6,549,840) and obviousness.

As per claims 1, and 4, Mikami et al. disclose a method of controlling a vehicle drive having a 4 4 mode of operation and other modes of operation using an electronic control system providing a torque output in response to driver demand, comprising: controlling torque output of one of an engine and transmission of vehicle when the vehicle is in the 4 4 mode stored in system memory and indicating a relationship of torque output as a function of accelerator pedal position and a speed parameter for reducing sensitivity of torque output to accelerator pedal position in the 4 4 mode of operation (see columns 45-46, lines 24-47; column 31, lines 8-52; columns 13-14, lines 55-7; column 10, lines 8-57; columns 53-54, lines 10-21; and column 2,

lines 15-64), controlling torque output of one of an engine and transmission of vehicle when the vehicle is in one of the other modes of operation stored in system memory and indicating a different relationship of torque output as a function of accelerator pedal position and a speed parameter (see columns 34-35, lines 25-53; and columns 36-37, lines 36-48). Mikami et al. do not disclose a calibration table. However, Mikami et al. disclose in columns 13-14, lines 66-7, the drive force or torque of vehicle is controlled so that vehicle can be driven in the four wheel driving mode with high drivability. In column 2, lines 33-42, "the front and rear drive force is equal to the operator's desired value of the vehicle drive force which is obtained on the basis of the amount of operation of the manually operated vehicle accelerating member and the running speed of the vehicle"; and also in column 2, lines 47-53, the operator's desired value is calculated on the basis of the operating amount of an accelerator pedal and the vehicle running speed. Therefore, it is obvious that there is a relationship between the drive force or torque output of vehicle and amount of an accelerator pedal and the vehicle running speed, and also, it is obvious that these relationship can be stored in a calibration table for clearly indicate a relationship of torque output as a function of different value of accelerator pedal position and each speed value for controlling torque distribution appropriately in the vehicle in order for reducing torque fluctuation occurs in different mode of operation.

As per claim 5, Mikami et al. discloses the speed parameter is engine speed for a vehicle drive comprising a manual transmission (see columns 25-27, lines 62-6).

As per claim 6, Mikami et al. disclose the speed parameter is transmission output shaft speed for a vehicle drive comprising an automatic transmission (see column 24, lines 35-67).

Also, as per claim 13, Mikami et al. disclose the transmission is drivingly coupled to a first set of wheels, a transfer case is optionally drivingly coupled to a second set of wheels, and, in the 4 4 mode of operation, second set of wheels is driven via transfer case (see column 4, lines 14-34; column 7, lines 43-64; and column 15, lines 5-54).

4. Claims 2-3, are rejected under 35 U.S.C.103(a) as being unpatentable over Mikami et al. (6,549,840) in view of Pritchard et al. (5,853,342).

As per claim 2, Mikami et al. do not disclose transmission output shaft torque. However, Pritchard et al. disclose the torque output comprises a transmission output shaft torque value determined in response to accelerator pedal position and transmission output shaft speed, and output shaft torque value is provided for a drive gear mode (see column 2, lines 10-43; and columns 3-4, lines 25-18). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Mikami et al. by combining the torque output comprises a transmission output shaft torque value determined in response to accelerator pedal position and transmission output shaft speed, and output shaft torque value is provided for a drive gear mode for increasing transmission output torque to improve vehicle operating conditions, and for applying a control signal corresponding to the selected range.

5. Claim 7, is rejected under 35 U.S.C.103(a) as being unpatentable over Sakai (4,715,467), in view of Pritchard et al. (5,853,342).

As per claim 7, Sakai discloses a method of controlling a vehicle drive having a 4 4 low mode of operation and other modes of operation using an electronic control system providing a torque output in response to driver demand, comprising: controlling torque output of one of an engine and transmission of vehicle when the vehicle is in the 4 4 low mode using a calibration

table stored in system memory and indicating a relationship of torque output as a function of accelerator pedal position and a speed parameter for reducing sensitivity of torque output to accelerator pedal position in the 4 4 low mode of operation (see columns 5-8, lines 21-21). Sakai does not disclose controlling torque output of one of an engine and transmission of vehicle when the vehicle is in one of the other modes of operation. However, Pritchard et al. disclose controlling torque output of one of an engine and transmission of vehicle when the vehicle is in one of the other modes of operation stored in system memory and indicating a different relationship of torque output as a function of accelerator pedal position and a speed parameter (see columns 9-10, lines 6-14). Sakai does not disclose calibration table. However, in column 5, lines 52-57, Sakai discloses "an engine torque determining section for obtaining engine torque Te from a table with reference to engine speed Ne and accelerator pedal position B", it is obvious that this is a calibration table represent a relationship of engine torque as a function of engine speed Ne and accelerator pedal position B. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Sakai by combining controlling torque output of one of an engine and transmission of vehicle when the vehicle is in one of the other modes of operation stored in system memory and indicating a different relationship of torque output as a function of accelerator pedal position and a speed parameter for detecting a drive mode of the motor vehicle selectable between other mode of operations.

6. Claims 8-10, and 12 are system claims corresponding to method claims 1-2,5, and 7 above. Therefore, they are rejected for the same rationales set forth as above.

Claim 11, is system claims corresponding to method claim 4 above. Therefore, it is rejected for the same rationales set forth as above.

Remarks

7. Applicant's argument filed on 8/4/03 has been fully considered and they are deemed to be persuasive. However, upon updated search, the new ground of rejection has been set forth as above.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalena Tran whose telephone number is 703-308-8223. The examiner can normally be reached on M-F (7:30 AM-5:30 PM), off every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Cuchlinski can be reached on 703-308-3873. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 701-308-1113.

TAN Q. NGUYEN
PRIMARY EXAMINER

/dt
October 16, 2003